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SUBJECT INDEX

The subject indexes of the *Review of Applied Entomology* not only provide for detailed manual searches under a wide variety of headings, but also provide a wide variety of standardised terms for use in computer-assisted searches of the CAB database. The most detailed entries are those under the names of arthropods, but other organisms, countries, chemicals, habitats and general subjects (e.g. Fertilizers; Mating disruption; Pest management; Reviews; Trap, sex-attractant) are also used as headings. Index headings are not selected from any one thesaurus, but fairly strict vocabulary control is achieved by careful checking of systematic names of organisms and chemicals, by adhering to CAB standards for pest-control chemicals and pharmaceuticals, and by selecting most other index headings to conform with other CAB abstract journals or with *Chemical Abstracts* or *Index Medicus*. All references are to abstract numbers.

Under the names of arthropods there are references to their control, distribution, food-plants, hosts, natural enemies, taxonomy, vector ability, and miscellaneous subjects. Entries for species will be found under the generic name, and there are also inverted names with the specific and subspecific epithets placed first. The names used for arthropods in this index are those used in the abstracts, because these names have all been checked against the card indexes maintained by the Institute. These card indexes are continuously updated to take account of taxonomic revisions, and in cases of difficulty the taxonomists employed by the Institute or by the British Museum (Natural History) are consulted. If two or more names are accepted by the *Review* for a taxon during one year, each name is entered separately, with a 'see also' cross-reference to other names. Cross-references from names used by authors but not accepted by the *Review* are given to the currently-accepted names.

Animals other than arthropods are indexed to specific level only, under English common names for the more important domesticated birds and mammals, or under scientific names. At both these types of heading will be found references to the arthropods that affect the animal concerned, and to the side-effects of pesticides. Cross-references are given between common names (sometimes inverted) and scientific names.

Plants are indexed under English common names of the more important or familiar crops, or under scientific names down to species level. At both these types of heading will be found references to the arthropods that affect the plant concerned, to arthropod-transmitted pathogens, and to the side-effects of pesticides. Cross-references are given between common names (sometimes inverted) and scientific names. Many plant headings have been selected to conform with *Horticultural Abstracts* and *Field Crop Abstracts*.

Viruses pathogenic for arthropods are indexed under the name of the host, and the hosts are listed at the heading 'Viruses and virus diseases'. Other pathogens of arthropods are indexed at the scientific name of the pathogen. Plant viruses and mycoplasma-like organisms are indexed at common names corresponding to those in the *Review of Plant Pathology*. Other pathogens of plants are indexed at the scientific names of the pathogen, if one is available, or else the English common name. As an aid to locating all the information concerning annelids, bacteria, fungi, helminths, molluscs and protozoans, an entry has been made for each relevant abstract at the name of either a phylum or a class.

Geographical locations are keyworded, as appropriate, to faunal regions, continents, countries, archipelagoes or islands, and (for Australia, Canada and the USA) to States, Provinces or Territories. The subheadings refer mainly to pest arthropods, with some references to pest control.

Chemicals are normally indexed under either a common name or a systematic name, but a few unidentified or complex substances are indexed under names used by authors. The majority of the common names used for chemicals for the control of arthropod pests are listed on pp. 1 - 6 of *RAE* volume 70, and in addition, other common names stated in the 6th. edition of the *Pesticide Manual* (noticed in *RAE/A* 68, 4152) to have been adopted by BSI, ISO or ANSI are now used. Common names of herbicides and plant growth regulators listed in recent issues of *Weed Abstracts* are now used in *RAE*, and so are the common names of other pesticides (including fungicides and nematocides) given in the *Pesticide Manual*. International Nonproprietary Names approved by the World Health Organization are also now used in *RAE*. Most substances without approved common names are indexed under the names used in the indexes of *Chemical Abstracts* volumes 86-95. Cross-references are provided to these inverted systematic names, and in some cases synonyms are given with the entries. Cross-references are also provided from inverted systematic names to many of the common names, and definitions are printed at these headings.

Habitat headings are chosen, whenever possible, beginning with the name of a crop (e.g. Apple orchards; Wheat fields). In most other cases, inverted names are selected as headings (e.g. Forests, montane; Grassland, alpine). Subheadings are mostly concerned with the distribution of beneficial arthropods and the non-target effects of pest control.

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Akehurst, B.C., Tobacco (ed. 2) [En] 2901
Akhvlediani, M.P., Fauna and ecology of parasites of aphids of eastern Georgia [Ru] 5179
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Appert, J.; Deuse, J., Pests of food and market garden crops in the tropics [Fr] 7342
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Ashburner, M.; Carson, H.L.; Thompson, J.N., Jr. (Editors)
The genetics and biology of *Drosophila* (vol. 3a) [En] 1897
The genetics and biology of *Drosophila* (vol. 3b) [En] 6354
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Book notices and reviews *contd.*

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Book notices and reviews *contd.*

- Griffiths, G.C.D. (Editor); Stone, A., Flies of the Nearctic Region. Volume I. Handbook. Part 1. History of Nearctic dipterology [En] 3681
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A catalogue of parasites and predators of terrestrial arthropods. Section B. Enemy/host or prey. Volume I. All except Hymenoptera Terebrantia [En] 5912
A catalogue of parasites and predators of terrestrial arthropods. Section B. Enemy/host or prey. Volume II. Hymenoptera Terebrantia [En] 5913
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Book notices and reviews *contd.*

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Handbook of pest management in agriculture
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- Ransom, R. (Editor), A handbook of *Drosophila* development [En] 6333
- Ratcliffe, N.A.; Rowley, A.F. (Editors), Invertebrate blood cells. Volume 2. Arthropods to urochordates, invertebrates and vertebrates compared [En] 4347
- Reade, S.N.S.; Sale, J.B.; Gallagher, M.D.; Daly, R.H. (Editors), The scientific results of the Oman flora and fauna survey 1977 (Dhofar) [En, Fr] 1947
- Reynolds, I.F. (Editor), Pesticides: synonyms and chemical names (ed. 5) [En] 2419
- Romoser, W.S., The science of entomology (ed. 2) [En] 1853
- Rozkošný, R., A biosystematic study of the European Stratiomyidae (Diptera). Volume 1. Introduction, Beridinae, Sarginae, Stratiomyinae [En] 6314
- Rungs, C.E.E., Descriptive catalogue of the Lepidoptera of Morocco. Faunal list and ecological observations (2 vols.) [Fr] 6382
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Book notices and reviews *contd.*

- Saunders, D.S., Biological clocks (ed. 2) [En] 5108
- Schwartz, P.H. (Editor), Guidelines for control of insect and mite pests of food, fibers, feeds, ornamentals, livestock, and households [En] 6254
- Schwenke, W. (Editor), The forest pests of Europe. Vol. 4. Hymenoptera and Diptera [De] 6738
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- Slobodkin, L.B., Growth and regulation of animal populations (ed. 2) [En] 3748
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- Complete guide to pest control – with and without chemicals [En] 565
- Fundamentals of pesticides – a self-instruction guide [En] 5695
- Webb, C.; Hawtin, G. (Editors), Lentils [En] 1596
- Wilson, M.C.; Turpin, F.T.; Provonsha, A.V., Practical insect pest management 2. Insects of livestock and agronomic crops (ed. 2) [En] 1176
- Wittmer, W.; Büttiker, W. (Editors) Fauna of Saudi Arabia. Vol. 2 1980 [En,De,Fr] 96
- Fauna of Saudi Arabia. Vol. 3 1981 [En,Fr,De] 5123
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Adoxophyes orana, on apple 4664
Araecerus fasciculatus 7087
Archips rosanus, on *Citrus* 1546
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Phosphamide (see Dimethoate)**Phosphamidon (2-chloro-3-(diethylamino)-1-methyl-3-oxo-1-propenyl dimethyl phosphate)**

- against
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 on *Cicer arictinum* 1417
 on wheat 1417
Amrasca biguttula, on okra 6638
A. devastans, on potato 3469
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A. gossypii, on *Capsicum* 7165
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Clavigralla gibbosa 4737
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Nilaparvata lugens, on rice 255
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Oligonychus spp., on date palm 4647
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Spilosoma obliqua 6790
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- calcium salt (2:3)
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 2-chloro-1-(2,4-dichlorophenyl)ethenyl diethyl ester (see Chlofenvinphos)
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- dimethyl 1-methyl-3-(methylamino)-3-oxo-1-propenyl ester, (E)- (see Monocrotophos)
- 3-(dimethylamino)-1-methyl-3-oxo-1-propenyl dimethyl ester, (E)- (see Dicrotophos)
- dipotassium salt, diet component for, *Pimpla turionellae* 159
- 4-(methylthio)phenyl dipropyl ester against
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- S-[2-(acetyl amino)ethyl] *O,O*-dimethyl ester
in Carabidae, toxicity of 7106
in Coccinellidae, toxicity of 7106
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- S-[2-chloro-1-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethyl] *O,O*-diethyl ester (see Dialifos)
- S-(chloromethyl) *O,O*-diethyl ester (see Chlormephos)
- S-[(6-chloro-2-oxo-3(2H)-benzoxazolyl)methyl] *O,O*-diethyl ester (see Phosalone)
- S-[(4-chlorophenyl)thio]methyl] *O,O*-diethyl ester (see Carbophenothion)
- S-[(4,6-diamino-1,3,5-triazin-2-yl)methyl] *O,O*-dimethyl ester (see Menazon)
- O-(2,4-dichlorophenyl) *O*-ethyl S-propyl ester (see Prothiofos)
- O,O*-diethyl S-[2-(ethylsulfinyl)ethyl] ester in maize, disulfoton metabolite 243
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- O,O*-diethyl S-[(ethylsulfinyl)methyl] ester in *Aphis fabae*, toxicity of 5704
in peat blocks, phorate product 6262
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- O,O*-diethyl S-[2-(ethylsulfinyl)ethyl] ester in maize, disulfoton metabolite 243
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- O,O*-diethyl S-[(ethylsulfinyl)methyl] ester in *Aphis fabae*, toxicity of 5704
in peat blocks, phorate product 6262
in soil, phorate product 6280
- O,O*-diethyl S-[2-(ethylthio)ethyl] ester (see Disulfoton)
- O,O*-diethyl S-[(ethylthio)methyl] ester (see Phorate)
- O,O*-diethyl S-[2-[(1-methylethyl)amino]-2-oxoethyl] ester (see Prothoate)
- O,O*-diethyl S-[4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (see Azinphos-ethyl)
- S-[(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)methyl] *O,O*-dimethyl ester (see Phosmet)
- O,O*-dimethyl S-[2-(methylamino)-2-oxoethyl] ester (see Dimethoate)

Phosphorodithioic acid contd.

- O,O*-dimethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (see Azinphos-methyl)
- S-[(1,1-dimethylethyl)thio]methyl] *O,O*-diethyl ester (see Terbufos)
- S,S'-1,4-dioxane-2,3-diyl *O,O,O',O'*-tetraethyl ester (see Dioxathion)
- O*-ethyl S,S-diphenyl ester (see Edifenphos)
- O*-ethyl S,S-dipropyl ester (see Ethoprophos)
- O*-ethyl O-[4-(methylthio)phenyl] S-propyl ester (see Sulprofos)
- S-[2-(ethylthio)ethyl] *O,O*-dimethyl ester (see Thiometon)
- S-[2-(formylmethylamino)-2-oxoethyl] *O,O*-dimethyl ester (see Formothion)
- S-[2-[(2-methoxyethyl)amino]-2-oxoethyl] *O,O*-dimethyl ester (see Amidithion)
- S-[(5-methoxy-2-oxo-1,3,4-thiadiazol-3(2H)-yl)methyl] *O,O*-dimethyl ester (see Methidathion)
- S,S'-methylene *O,O,O',O'*-tetraethyl ester (see Ethion)

Phosphorothioic acid

- O,O*-bis(1-methylethyl) S-(phenylmethyl) ester
in *Musca domestica*, esterase inhibition by 7317
in *Nephotettix cincticeps*,
carboxylesterase inhibition by 3653
in *Tetranychus kanzawai*, esterase inhibition by 4270
synergist for, malathion 7317
with malathion, against, *Nephotettix cincticeps* 3653
- O-(4-bromo-2-chlorophenyl) *O*-ethyl S-propyl ester (see Profenofos)
- O-(4-bromo-2,5-dichlorophenyl) *O,O*-diethyl ester (see Bromophos-ethyl)
- O-(4-bromo-2,5-dichlorophenyl) *O,O*-dimethyl ester (see Bromophos)
- O-[5-chloro-1-(1-methylethyl)-1H-1,2,4-triazol-3-yl] *O,O*-diethyl ester (see Isazophos)
- O-[4-[(chloromethyl)sulfinyl]phenyl] *O,O*-diethyl ester against
Earias insulana, on cotton 1056
Pectinophora gossypiella, on cotton 1056
- S-[(6-chloro-2-oxooxazol[4,5-b]pyridin-3(2H)-yl)methyl] *O,O*-dimethyl ester (see Azamethiphos)
- O-[4-[(4-chlorophenyl)thio]phenyl] *O*-ethyl S-propyl ester against
Heliothis virescens, on cotton 4089
H. zea, on cotton 4089
Tetranychus spp., on cotton 4089
with azinphos-methyl, against, *Spodoptera frugiperda*, on cotton 4089
- O-(2,5-dichloro-4-iodophenyl) *O,O*-dimethyl ester (see Iodofenphos)
- O-[2,5-dichloro-4-(methylsulfinyl)phenyl] *O,O*-diethyl ester
cholinesterase inhibition by 5713
determination of 5713
residues of 5713
- O-[2,5-dichloro-4-(methylsulfonyl)phenyl] *O,O*-diethyl ester
cholinesterase inhibition by 5713
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residues of 5713
- O-[2,5-dichloro-4-(methylthio)phenyl] *O,O*-diethyl ester (see also Chlorthiophos)
- O-(2,4-dichlorophenyl) *O*-ethyl S-propyl ester against, *Dialeurodes citri*, on *Citrus* 3392
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- O-(3,6-dichloro-2-pyridinyl) *O,O*-diethyl ester, in *Coptotermes formosanus*, chlorpyrifos metabolite 4541
- O,O*-diethyl S-[2-(ethylsulfinyl)ethyl] ester, in maize, disulfoton metabolite 243
- O,O*-diethyl S-[(ethylsulfinyl)methyl] ester, in *Aphis fabae*, toxicity of 5704

Phosphorothioic acid contd.

- O,O*-diethyl S-[2-(ethylsulfonyl)ethyl] ester, in maize, disulfoton metabolite 243
- O,O*-diethyl O-[2-(ethylthio)ethyl] ester (see Demeton-O)
- O,O*-diethyl S-[2-(ethylthio)ethyl] ester (see Demeton-S)
- O,O*-diethyl O-[6-methyl-2-(1-methylethyl)-4-pyrimidinyl] ester (see Diazinon)
- O,O*-diethyl O-[4-(methylsulfinyl)phenyl] ester (see Fensulfothion)
- O,O*-diethyl O-[4-(methylsulfonyl)phenyl] ester
in carrot, residues of 2205
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- O,O*-diethyl O-(4-nitrophenyl) ester (see Parathion)
- O,O*-diethyl O-(5-phenyl-3-isoxazolyl) ester
against, *Echinocnemus squameus*, on rice 7001
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- O,O*-diethyl S-(phenylmethyl) ester, with HCH, and parathion-methyl, against, *Dimorphopterus spinolae*, on *Phragmites* 6451
- O,O*-diethyl O-(1-phenyl-1H-1,2,4-triazol-3-yl) ester (see Triazophos)
- O,O*-diethyl O-pyrazinyl ester (see Thionazin)
- O,O*-diethyl O-2-quinoxalinal ester (see Quinalphos)
- O,O*-diethyl O-(3,5,6-trichloro-2-pyridinyl) ester (see Chlorpyrifos)
- O-[2-(diethylamino)-6-methyl-4-pyrimidinyl] *O,O*-diethyl ester (see Pirimiphos-ethyl)
- O-[2-(diethylamino)-6-methyl-4-pyrimidinyl] *O,O*-dimethyl ester (see Pirimiphos-methyl)
- O-(1,6-dihydro-6-oxo-1-phenyl-3-pyridazinyl) *O,O*-diethyl ester against
Melanoplus sanguinipes 2033
Nilaparvata lugens 4605
Semiothisa clathrata, on lucerne 2707
Sitona spp., on pea 7137
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- O,O*-dimethyl S-[2-(methylamino)-2-oxoethyl] ester (see Omethoate)
- O,O*-dimethyl S-[2-[(1-methyl-2-(methylamino)-2-oxoethyl)thio]ethyl] ester (see Vamidothion)
- O,O*-dimethyl O-[3-methyl-4-(methylthio)phenyl] ester (see Fenthion)
- O,O*-dimethyl O-(3-methyl-4-nitrophenyl) ester (see Fenitrothion)
- O,O*-dimethyl O-(4-nitrophenyl) ester (see Parathion-methyl)
- O,O*-dimethyl O-(2,4,5-trichlorophenyl) ester (see Fenchlorphos)
- O,O*-dimethyl O-(3,5,6-trichloro-2-pyridinyl) ester (see Chlorpyrifos-methyl)
- O-(6-ethoxy-2-ethyl-4-pyrimidinyl) *O,O*-dimethyl ester (see Etrifmos)
- O*-ethyl *O*-methyl O-(2,4,5-trichlorophenyl) ester against
Cydia pomonella, on apple 6596
Dysaphis devectora, on apple 6596
Synanthedon myopaeformis, on fruit trees 3370
Yponomeuta malinellus, on apple 6596
- S-[2-(ethylsulfinyl)ethyl] *O,O*-dimethyl ester (see Oxydemeton-methyl)
- S-[2-(ethylsulfonyl)ethyl] *O,O*-dimethyl ester (see Demeton-S-methyl sulphone)

Phosphorothioic acid *contd.*

O-[2-(ethylthio)ethyl] *O*,*O*-dimethyl ester
(see Demeton-*O*-methyl)

S-[2-(ethylthio)ethyl] *O*,*O*-dimethyl ester
(see Demeton-*S*-methyl)

Phosphorotrithioic acid

S,S,S-tributyl ester

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	Frequency	Member Country Rates £	Non-Member Country Rates £	Non-Member Country Rates US\$	
Main abstract journals					
Agricultural Engineering Abstracts	M	85.00	85.00	181.00	
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	B - Plant Nematology	Q	30.00	45.00	97.00
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Index Veterinarius	M	144.00	222.00	470.00	
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Pig News and Information	Q	28.00	28.00	59.00	
Journals produced with Associated Organizations					
Abstracts on Hygiene & Communicable Diseases	M	70.00	70.00	175.00	
Bulletin of Zoological Nomenclature	Q	40.00	40.00	85.00	
Tropical Diseases Bulletin	M	50.00	50.00	125.00	
		UK Rate £	Non-UK Rate US\$		
* Food Science and Technology Abstracts	M	360.00	790.00		

A - Annual

H - Half yearly

M - Monthly

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